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Infusion Bag, Especially for Making Tea

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This invention concerns an infusion bag, especially for making tea, with chambers that contain a quantity of substance and are composed of a filter material.

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Infusion bags for tea in different forms of embodiment are common; it has become prevalent to use two-chamber infusion bags with chambers arranged next to one another side by side, each having a quantity of the tea product in the form of dried, crushed tea leaves. The two chambers are connected to one another at the base by a crosswise fold, also called a base fold, to which a string is attached with a tag. Generally, a top closing fold is produced in two phases in which the corners of the infusion bag are folded down in the first phase and the trapezoidal part remaining at the top is turned down in the second. Then the folded parts are attached together and the end of the string is attached at the same time. This type of two-chamber infusion bag is known, for example from German Patent 1 001 944 by the applicant, and is composed of an easily permeable material which makes it possible for the infusion fluid to break down the material to be extracted, especially tea, and to dissolve the substance contained therein. Filter paper materials, in particular, are used for this.

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To attach the string to the infusion bag and to the tag, and to connect the top ends of a two-chamber infusion bag, for example, it is known how to use metal clamps, so-called hooks, which are arranged near the fold on the top end of the infusion bag or on the tag. It is also common to glue the string between the top end of the infusion bag and the tag to it, for example with materials that can be heat-sealed and the like.

None of the known ways of connecting and/or attaching it guarantees a secure connection or attachment of the infusion bag to the string or tag. Thus, particularly when a locking clamp is used, the string is not securely clamped between the locking clamps, so the string can slip out of the clamp relatively easily and can thus become detached from the tag or from the infusion bag. When an adhesive connection is used, there is a problem precisely apportioning and positioning the adhesive and the string. Especially, when infusion bags for tea are used in which the infusion liquid is generally used in a heated or boiled state, an adhesive connection can be dissolved due to the relatively high temperatures and thus become unreliable.

Another basic problem is that the connecting media, i.e., locking clamps, adhesives and the like, have an effect that changes or influences the taste and can bother the consumer.

The two-chamber infusion bags known in the past also have the disadvantage that the chambers are very close together so that the distribution of the tea product during infusion is very unfavorable and is concentrated in a spatially small area.

The problem of this invention is therefore to propose a generic infusion bag that is unique in appearance and easy to handle, has improved infusion behavior and can also be produced very economically.

As the technical solution to this problem, the invention proposes an infusion bag, especially for making tea, with chambers made of a filter material, containing a quantity of substance, wherein
5 at least two chambers produced and filled independently of one another are connected to a hanger, at least along one common edge, into a unit.

The infusion bag in the invention has the advantage that two bags produced independently of one another are arranged along one edge on the hanger and are positioned separately from one another
10 during infusion, so there is a lot of space for the distribution of the tea. This improves the infusion behavior. In particular, there is a unique appearance by practically connecting a plurality of individual tea bags along one edge to a hanger. These individual tea bags composed of individual chambers thus form a bundle of tea bags. The special advantage of this design is that it is very economical to produce. And when a tape-like carrier material is used as the hanger, this
15 saves tags, strings and conventional means of attachment, for example a metal clamp or string for attachment.

In terms of production, it is known in the state of the art how to divide a pair of tubular strips into individual chambers, arrange them so they overlap, align the chambers with one another and
20 connect the strips at the dividing lines between the chambers. Then, the connected pairs are separated from the other strips. This creates two-chamber packets. They are normally connected to one another on both edges formed by the dividing lines and must then still be provided with a hanger. The production technology for this is expensive and—as described above—there are disadvantage to using it.

25 According to one embodiment of the invention, first completely independent tubular strands divided into chambers and filled with medium to be infused, for example tea, are produced and each is attached to the hanger separately and cut from its strand.

In a second embodiment of the invention, the chambers are made of strips of filter material that is heat-sealed along three or four lateral edges of the chambers.

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One particularly advantageous proposal in the invention is a hanger in the form of a strip-like carrier material made completely independently of these strands. The strip-like carrier material can be preprinted. Compared to conventional tea bag tags, the advantage is that the strip-like carrier material provides large surfaces for printing. The surface can also be punched to make a hanger out of the piece of the carrier material that forms the hanger areas punched by folding out that can be suspended, for example, on the lid of the teapot or teapot spout. The strip-like carrier material can come in coils, for example. It is transported in a longitudinal direction. From one side direction, a first individual chamber strand is brought up, an individual chamber is attached to one edge on the strip-like carrier material and cut off the strand. At the same time, or in a subsequent position, a second individual chamber strand can be brought up from the other side of the strip-like carrier material. The chamber the furthest out in front is attached to the carrier material, here again, and the alignment is such that both chambers are aligned to one another with their attachment edge on the carrier material, and the second chamber is cut off from its strand. With feed control, the second attachment position on the carrier material is found now, and the attachment method is repeated. It is a special advantage that it is proposed that the carrier material positioned between the two individual chambers be made longer than the individual chambers. The carrier material is advantageously arranged between two bags. However, it can also basically carry several bags on its surface and can thus be on the outside of the whole bunch. The bags and the carrier strip are attached, for example, by welding, heat-sealing or the like.

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Now the infusion bag in the invention can be placed in a package in such a way that the longer carrier strip projecting from the individual chambers is free on the side of the package that is opened. This has the special advantage that the person using it grasps the free end and can use

the tea bag without having to touch it. When one grasps the free end and pulls out the infusion bag, because of gravity, the tea bags fold down automatically on the attachment edge, so that the user has the free hanger in his hand, while the tea bags hang down free and the attachment edge is folded. Because of the tension produced by the folding, the tea bags do not bear down hard on one another and the substance in the chambers is loose and distributed freely in the chambers, which improves its infusion behavior. If the hanger is a strip-like carrier material, as was proposed in one advantageous proposal in the invention, it can have punching, so the punching, especially T-shaped, can be arranged on a teapot spout or a teapot lid.

Other advantages and features of the invention will be seen from the following description and figures.

Fig. 1 shows a perspective view of one example of embodiment of an infusion bag;

Fig. 2 shows the view in Fig. 1 in the preparation position;

Fig. 3 is the view in Fig. 1 in the position of use;

Fig. 4 is a schematic side view of the view in Fig. 1;

Fig. 5 is a schematic side view of the view in Fig. 3 and

Fig. 6 is a top view of one example of embodiment of a hanger.

The form of embodiment of an infusion bag 1 shown in the figures is comprised of two individual chambers 2 and 3, which are connected to a hanger 4 along one connecting edge 5. The chambers are closed along edges 6 and 7 and cut off of a tubular strip in the known way.

Figure 1 shows the state of the infusion bag 1 in its packable and packed state. The hanger 4, in the form of a strip of carrier material, is longer than chambers 2 and 3 and thus projects with one free end.

If, as shown in Fig. 2, the hanger 4 is grasped, as shown by finger 12 and the infusion bag 1 is lifted, chambers 2 and 3 fall away from one another in the direction of arrow 8, and they turn down in the area near connecting edge 5.

After they are finished turning down, the state shown in Fig. 3 exists, in which the hanger area 10 of the hanger 4 is free and the chambers 2, 3 hang free ready for infusion. The seam 9 shown in Figures 2 and 3 is made out of a tubular strip in the production process of chambers 2, 3. When chambers 2,3 turn down going from the state in Fig. 2 to the position in Fig. 3, the material in chambers 2,3 is loosened and distributed freely in chambers 2,3, so that during subsequent brewing, the material stored in chambers 2, 3 can really expand and unfold its full flavor.

The state of the infusion bag 1 shown in the perspective view in Fig. 1 is shown in a side view in Figure 4. Fig. 4 shows practically the state of the infusion bag 1 directly after use. Chambers 2 and 3 are attached to the hanger 4 along the connecting edge 5, and the hanger 4 is cut to length in the area near edge 13.

Fig. 5 shows the state shown in the perspective view in Fig. 3 in a side view, where it is easy to see that chambers 2,3 hang free at some distance from one another to improve the infusion behavior.

Fig. 6 shows an example of embodiment of a hanger 4, consisting of a strip, for example made of film, paper or the like, which has punch holes 14, 15. Due to the punching 14, the rectangle 16 can be folded out from the hanger 4. Due to the punching 14, which is T-shaped, the hanger can be "buttoned" or otherwise arranged on a teapot spout or lid.

The hanger 4 is a part made of a material, preferably in the shape of a strip, that is printed and if necessary punched. During production, it is moved along a feed direction and in the example of
5 embodiment shown, connected first by one side to a chamber 2, then by the other side, to a chamber 3. The chambers are cut off of their corresponding strands after the connection is made. After a corresponding feed, the hanger 4 is cut off the strip, to form the embodiment shown in Figs. 1 and 4.

10 The chambers can also be arranged on only one side of the hanger 4, or there can be different numbers of chambers arranged on both sides. Of course, the chambers can also have different contents, for example different types of tea and/or aromatic substances, to prepare mixtures simply in this way.

15 Besides the form shown for making the chambers 2,3, it is also possible to produce the chambers 2,3 out of a strip of filter material, wherein the side edges of chambers 2,3 are preferably closed by heat-sealing.

The examples described are used only for explanation and are not limiting.

Reference List

	1	Infusion bag
5	2	Chamber
	3	Chamber
10	4	Hanger
	5	Connecting edge
	6	Edge
15	7	Edge
	8	Arrow
20	9	Seam
	10	Hanger area
	11	Grasping area
25	12	Finger
	13	Edge
30	14	Punching
	15	Punching